## PSEUDO-ELEPHANTOPUS SPICATUS, A WEED OF POTENTIAL IMPORTANCE IN FLORIDA

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Pseudo-elephantopus spicatus (B. Juss.) Gleason, a composite originally described from French Guiana and now known as a wide-spread weedy plant of the American and Old World tropics, was first recorded from the United States by Dr. F. R. Fosberg (Amer. Midl. Nat. 29: 786. 1943), on the basis of a specimen collected by O. E. Baynard in April 1942 in a picnic area in Hillsborough State Park, northeastern Hillsborough County, in central western peninsular Florida, and sent for identification to the Bureau of Plant Industry. It was accompanied by the note that 2 plants had been observed in 1941, and about 50 in 1942. Dr. Erdman West of the Florida Agricultural Experiment Station has now sent another specimen collected by E. B. Hadley at Bradenton, Manatee County, the next county south of Hillsborough County, on 27 January 1947. The finder stated that it is a pestiferous weed in cultivated fields, and is not relished by cattle. Apparently it is getting well established in western peninsular Florida.

The plant has usually been known as *Elephantopus spicatus* Juss. or *Distreptus spicatus* Cass. In 1902 C. F. Baker, in his revision of the Elephantopeae (Trans. Acad. Sci. St. Louis 12: 54) adopted for the genus the older name *Pseudelephantopus* of Rohr, and he has been followed by most recent authors, including Gleason in his treatment in the North American Flora. W. R. Philipson, who upholds the genus as distinct from *Elephantopus*, has recently stated (Journ. Bot. 76: 301. 1938) that the original spelling of the name was *Pseudo-Elephantopus*. Not having access to the original publication by Rohr<sup>1</sup>, I have followed him except for decapitalizing the second component of the name. Philipson also states that the name *Pseudelephantopus spicatus*,

¹ Since this paper was put in type, I have been able to examine Rohr's original publication of the name Pseudo-Elephantopus and corroborate Philipson's statements regarding it. Each of the half dozen references to Rohr's paper that I have examined differs in details from each of the others, and each, including Philipson's, is incorrect or incomplete in at least one particular. The correct citation is: Pseudo-Elephantopus Rohr, Skrivter af Naturhistorie-Selskabet (Kiøbenhavn) 2 (1): 214, 1792. Vol. 2 was published in two separately paged hefter, so that it is necessary to cite the part in which the name appeared; de Candolle and Pfeiffer, the only authors who indicate the part, wrongly give it as part 2.

cited by Gleason (North Amer. Fl. 33: 109. 1922) as published by Robr in 1792, was actually first printed in the North American Flora, and should be ascribed to Gleason. The name *Elephantopus spicatus*, when first published by Aublet (Hist. Pl. Guiane Franç. 2: 808. 1775), was ascribed to B. de Jussieu. No diagnosis was given, only a reference to Sloane's History and Catalogue, in the first of which a sufficient description is given to establish the name.

Pseudo-elephantopus spicatus is a simple or branching perennial herb up to about 1 meter high, thinly erect-pilose, with alternate, sessile, linear to oblong or obovate, serrulate or entire leaves, and slender usually elongate terminal spikes of white or whitish, 4-flowered, subcylindric, sessile heads, solitary or usually in small clusters in the axils of reduced leaves or bracts. The genus, which is monotypic, is related to Elephantopus, but differs remarkably in its pappus, which is unique in the whole family. It is described by Gleason as consisting of 10–15 bristles, including 2 long stout lateral ones plicate at the tip, 2 straight ones almost as long, and several short scarious bristles, all gradually dilated and fimbriate-ciliate at base. Although about 10 to 15 elements can be made out in the pappus, the shorter ones are mostly only incompletely separated bristles formed by the laceration of the dilated paleaceous bases of the longer ones, and the pappus seems to me better described as follows: Pappus 1-seriate, of about 5-7 bristles or awns; the 1-3 on outer side of achene (rarely wanting) usually about half as long as the others, slender, hispidulous, straight or sometimes irregularly once plicate toward apex, narrowly paleaceous-dilated and hairy at base and there sometimes lacerate into 1 or 2 much shorter bristles; the 2 (rarely 3) on the inner side of achene almost setiform, about as long as the straight part of the lateral awns, straight, hispidulous throughout, paleaceous-dilated at base and there cleft into one to several bristly or paleaceous segments on each side; the 2 on the angles stouter, very stiff, at base paleaceous and cleft like the inner awns (rarely uncleft and merely hispidulous), minutely hispidulous below, smooth and terete above, abruptly twice plicate toward apex, the extreme tip minutely hispidulous.

Mr. Hadley's statement regarding the weedy nature of this

plant in Florida is of interest because of what is known of its behavior in other regions where it has become introduced. Of special significance is a note published by Auguste Chevalier, the well-known writer on African plants and on tropical plants in general, under the title "Sur une mauvaise herbe de Tahiti" (Revue Bot. Appl. et Agr. Trop. 11: 119-120. 1931). In that island it bears the French names "faux-tabac" and "faux-tabac des Marquises." Introduced not long ago, it tends to spread along roads and in fallow land, and is as harmful to cultivation as lantana or guava trees. In certain valleys near Papeete it forms a thick carpet which kills all grass. Its destruction, according to an article by a local agriculturist cited by Chevalier, is difficult because it has to be dug out; the hooked awns of the pappus adhere to clothing and the hair of animals and enable it to spread everywhere. According to an inhabitant of the Marquesas, the plant was imported from America as a forage plant and is said to afford good pasturage there, but in Tahiti animals do not feed upon it. I have found no other reference to support the statement that it is a good forage plant in tropical America.

Setchell, in his paper on Tahitian spermatophytes (Univ. Calif. Publ. Bot. 12: 212. 1926), recorded Elephantopus mollis H. B. K. as abundant by waysides and in fields in the District of Faaa. He stated that it was a weed of recent introduction, much disliked by the people of Tahiti, who call it "false tobacco"; the native Tahitians call it "ava'ava" and "ava'a," with the same significance. Chevalier questioned whether he might not have mistaken P. spicatus for E. mollis. That Setchell did not make this very unlikely misidentification is proved by an achene of Setchell & Parkes 43, the collection cited by Setchell, kindly sent me by Miss Annetta M. Carter, which is definitely that of Elephantopus mollis. Dr. F. Raymond Fosberg, who has collected in Tahiti, informs me that both E. mollis and P. spicatus are common and bad weeds in that island, where both are called by a name or names essentially identical with those reported by Setchell. He regards E. mollis, which has broader leaves and grows rampantly to a height of 5 or 6 feet, as the more troublesome weed of the two.

In Guam, Safford (Contr. U. S. Nat. Herb. 9: 268. 1905) speaks of it, under the name *Elephantopus spicatus*, as a common

and troublesome weed, and states that it was collected in the island by Chamisso, who was there in 1817. Merrill (Enum. Philipp. Flow. Plants 3: 596. 1923) gives it as common in waste places in the settled area of the Philippines, but says nothing about its weedy qualities. Grisebach (Fl. Brit. W. Ind. 355. 1861) long ago mentioned it as a troublesome weed in Jamaica. Spencer Moore, in Fawcett and Rendle's Flora of Jamaica (7: 166. 1936) does not refer to it as a weed, but quotes Sloane (1707) to the effect that the hard stalks and leaves were used as brooms to sweep houses.

In Java, Backer (Onkruidflora der Javasche suikerrietgronden, p. 755. 193?) states that it was first observed in 1917 in a shady kampong at Bidara tjina, just south of Meester Cornelis (near Batavia), where it was already well established, thereafter spreading to Buitenzorg (1919) and Pasoeroean (1925), thriving at both places and spreading spontaneously but at first slowly.

All the available evidence indicates that *Pseudo-elephantopus* spicatus, however interesting as an addition to the adventive flora of the United States, is a potentially injurious weed which should be extirpated if possible before it becomes too thoroughly established.

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FLOERKEA PROSERPINACOIDES IN Nova Scotia,—Floerkea proserpinacoides, new to the flora of Nova Scotia, was found on May 29, 1948, at Coldbrook, Kings County. The plants were growing in profusion on the wet river-meadow at the foot of a high bank close above the road-bridge, and about half a mile west of Coldbrook station. Although showing no signs of recent arrival, the species may well be of foreign origin. The material was mostly flowering, a few young fruits being seen. By the end of June the fruiting condition was predominant. The collection substantiating this report is Erskine & Schofield no. 2, sheets of which have been deposited at the Acadia and Gray Herbaria.

The northeastern range-limit of this species is given as being